

CLAIMS

What is claimed is:

- 1 1. A method for generating a mapping scheme, the method comprising:
 - 2 reading source data definition that includes information about attributes of a source;
 - 3 reading target data definition that includes information about attributes of a target;
 - 4 receiving commands from a user, wherein said commands establish a mapping
5 between one or more attributes of said source and one or more attributes of
6 said target; and
- 7 based on said commands, automatically generating a mapping scheme that represents
8 said mapping, wherein said mapping includes at least one of
9 multiple attributes of said source mapped to a single attribute of said
10 target; and
- 11 multiple attributes of said target mapped to a single attribute of said
12 source.

- 1 2. The method of claim 1, further comprising using said mapping scheme to create an
2 electronic document with data from said source, wherein the electronic document has a
3 particular format dictated by the target data definition.

- 1 3. The method of claim 1, further comprising using said mapping scheme to store, into
2 said target, data from an electronic document, wherein the electronic document has a
3 particular format dictated by the source data definition.

1 4. The method of claim 1, wherein said mapping scheme further includes instructions on
2 how to collapse a number of attributes of said source into a smaller number of attributes of
3 said target.

1 5. The method of claim 1, wherein said mapping scheme further includes instructions on
2 how to expand a number of attributes of said source to a greater number of attributes of said
3 target.

1 6. The method of claim 1, wherein:
2 the step of receiving commands from a user includes receiving user input that
3 specifies a condition, and an action associated with the condition; and
4 the method further comprises the steps of
5 performing an operation that includes converting data, based on said mapping
6 scheme, from the source to a format associated with the target;
7 during performance of said operation, performing the steps of
8 determining whether the condition is satisfied; and
9 if the condition is satisfied, then performing said action.

1 7. The method of claim 1, wherein:
2 the step of receiving commands from a user includes receiving user input that
3 specifies a specific set of instructions; and
4 the method further comprises the steps of
5 performing an operation that includes converting data, based on said mapping
6 scheme, from the source to a format associated with the target; and

during performance of said operation, executing the specific set of instructions to affect said operation.

1 8. The method of claim 1, wherein:

the step of receiving commands from a user includes receiving user input that

declares a variable to which values can be assigned; and

the method further comprises the steps of

performing an operation that includes converting data, based on said mapping

scheme, from the source to a format associated with the target; and

during performance of said operation, using said variable.

1 9. The method of claim 1, wherein:

the step of receiving commands from a user includes receiving user input that

specifies a precompiled routine; and

the method further comprises the steps of

performing an operation that includes converting data, based on said mapping

scheme, from the source to a format associated with the target; and

during performance of said operation, calling said precompiled routine to

affect said operation.

1 10. The method of claim 1, wherein:

the attributes of said source correspond to a number of hierarchical levels:

the attributes of said target correspond to a number of hierarchical levels; and

the method further comprises the step of receiving user input that establishes a

mapping between one or more hierarchical levels of said source and one or

more hierarchical levels of said target.

1 11. The method of claim 10, wherein said mapping scheme includes instructions on how
2 to collapse a number of hierarchical levels of said source into a smaller number of
3 hierarchical levels of said target.

1 12. The method of claim 10, wherein said mapping scheme includes instructions on how
2 to expand a number of hierarchical levels of said source to a greater number of hierarchical
3 levels of said target.

1 13. The method of claim 1, wherein at least one of the source and the target is a database.

1 14. The method of claim 1, wherein at least one of the source and the target is an XML
2 document.

1 15. The method of claim 1, wherein said source is one of a database and an XML
2 document and the target is the other of a database and an XML document.

1 16. The method of claim 1, wherein the source is a first XML document and the target is
2 a second XML document.

1 17. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 1.

1 18. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 2.

1 19. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 3.

1 20. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 4.

1 21. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 5.

1 22. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 6.

1 23. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 7.

1 24. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 8.

1 25. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 9.

1 26. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 10.

1 27. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 11.

1 28. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 12.

1 29. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 13.

1 30. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 14.

1 31. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 15.

1 32. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 16.